

REMARKS

Claims 1-16, 19-34, 36, 52, and 53 are currently pending in this application. No amendments have been made herein. Accordingly, claims 1-16, 19-34, 36, 52 will remain pending in the application.

Applicant respectfully reserves the right to pursue the claims as originally filed or similar claims as well as any non-elected, canceled or otherwise unclaimed subject matter in one or more continuation, continuation-in-part, or divisional applications.

Rejections under 35 U.S.C. §103 (a)

Claims 1-16, 19-34, 36, 52 and 53 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. US 6,528,167 to O’Gara (“O’Gara”) in view of U.S. Patent No. 6,210,570 to Holloway (“Holloway”). This rejection is traversed.

The claims provide a hybrid inorganic/organic monolith having an interior area and an exterior surface, wherein said monolith is represented by (Formula I),

As described in the present specification (e.g., in the Background of the Invention), monolithic materials are complex materials to make, and are prepared from a very different process than porous particles. Monoliths prepared prior to this invention also had significant performance problems due to low bonded phase surface concentrations after bonding, reduced low pH stability, reduced retention times and peak compression.

Applicant notes that O’Gara does not disclose porous monolithic materials. Additionally, nowhere in O’Gara is it described how one of ordinary skill in the art would make a monolithic material from the precursors of O’Gara. As such, one of ordinary skill in the art would have had no motivation to make a monolithic material from the materials of O’Gara and no reasonable expectation of success in making such a monolith.

The Examiner relies on Holloway to rectify this deficiency. Holloway is related to a sol-gel preparation of silica monoliths. The Examiner states that “a person having ordinary skill in the art understands that when carrying out sol-gel reactions, advanced aging leads to the

formation of networks of silica-based materials instead of discrete particles.” Applicant respectfully disagrees.

As an initial matter, Applicant respectfully notes that even in silica-based materials, the formation of a monolith from a sol-gel reaction is not guaranteed. Indeed, as described in Georges Guiochon review article, *Journal of Chromatography A*, 1168 (2007) 101–168 (copy filed concurrently with an Informaiton Disclosure Statement), “silica monoliths have proven to be most difficult to prepare. Few scientists have reported on any successful attempts at reproducing the preparation methods described by Nakanishi et al. [21,38,39] and Nakanishi and co-workers [46,62,64,66]” (Page 161).

Furthermore, Holloway does not discuss the preparation of monoliths of any other type of material, let alone monoliths of a hybrid material. One of ordinary skill in the art would immediately recognize that the solubility and reactivity of hybrid materials are considerably different from those of silica-based materials. Furthermore, where silica-based materials can only form 4 siloxane bonds during reaction, hybrid materials can form anywhere from 2 to more than 6 siloxane bonds depending on the reaction. As such, Applicant respectfully asserts that one of ordinary skill in the art would recognize that, due to wildly varying solubilities and reactivities between silica-based materials and hybrid materials, a particular sol-gel reaction that was successful with a silica-based material would not necessarily lead to success with a hybrid precursor to provide a similar material.

That is to say, in view of the lack of teaching or direction in Holloway of how to obtain the claimed monoliths using hybrid precursors, one of ordinary skill in the art would not be motivated to combine Holloway and O’Gara and/or modify the teachings of Holloway. Moreover, even if one of ordinary skill in the art were to modify Holloway to utilize the precursors described in O’Gara, there would have been no reasonable expectation of success in achieving a monolith of such materials. This is also particularly true when the disclosure of Holloway, a patent that issued in 2001 is construed by one of ordinary skill in the art in view of the Georges Guiochon review article mentioned above.

Finally, Applicant respectfully asserts that even if one of ordinary skill in the art were able to obtain a monolith of the materials of O’Gara by a sol-gel process or some other process,

there would have been no reasonable expectation of success in removing and replacing the silicon-alkyl surface groups of said monolith in the same manner as described in O’Gara and claimed, for example, in claims 36 and 52 that provide methods for preparing the monolith materials of claim 1. Indeed, the particles of O’Gara are capable of being stirred in a solution directly with the reactants whereas a solid monolith must be reacted by diffusing the reactants into the monolith. One of ordinary skill in the art would recognize that the conditions for performing such a reaction on a monolith is not mere optimization.

As such, Applicant contends that one of ordinary skill in the art would not find the instant claims obvious in light of O’Gara alone or in combination with Holloway.

Claims 1-16, 19-34, 36, 52 and 53 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Publication No. US 2003/0150811 to Walter et al (“Walter”) in view of O’Gara. This rejection is traversed.

As the Examiner has stated, “the applied reference...constituted prior art only under 35 U.S.C. 102(e).”

Walter was assigned to WATERS INVESTMENT LIMITED by an assignment from the inventors recorded on December 2, 2002 at Reel/Frame 013538/0960. Likewise, the instant application was assigned to WATERS INVESTMENTS LIMITED by an assignment recorded on December 7, 2006 at Reel/Frame 018233/0325. Subsequently, both Walter and the instant application were assigned from WATERS INVESTMENTS LIMITED to WATERS TECHNOLOGIES CORPORATION, the current assignee of record for both, by virtue of a merger recorded on April 17, 2009 at Reel/Frame 022552/0606 (Walter) and on June 17, 2009 at Reel/Frame 022837/0404 (the instant application).

As such, Applicant contends that, in accordance with 35 U.S.C. 103(c), Walter does not qualify as prior art. Because Walter and the instant application were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the

same person, Walter qualifies as prior art only under 35 U.S.C. 102(e), as acknowledged by the Examiner. .

As such, Applicant respectfully requests withdrawal of the rejection over Walter.

Rejections for Non-Statutory Double Patenting

Claims 1-15 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting over Claims 2, 13-17 and 50-55 of copending Application No. 11/631,341.

Claim 1 stands rejected on the grounds of nonstatutory obviousness-type double patenting over Claim 1 of U.S. Patent No. 7, 250,214 to Walter in view of O’Gara.

Applicant does not agree with the rejections. Nevertheless, Applicant requests an abeyance of the double patenting rejections until such time that the claims are found allowable but for the obviousness-type double patenting rejections. If necessary, Applicant will consider filing Terminal Disclaimers to overcome the rejections.

CONCLUSION

In view of the foregoing, reconsideration and withdrawal of all rejections, allowance of the instant application with all pending claims, and passage of the instant application to issuance are earnestly solicited. If a telephone conversation with Applicants' representatives would help expedite the prosecution of the above-identified application, the Examiner is urged to call Applicant's representatives at the telephone number below.

In view of the amendments and remarks made herein, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are respectfully requested. Please charge any required fee or credit any overpayment to Deposit Account No. 04-1105, under Order no. 59894 (49991).

Dated: June 22, 2010

Respectfully submitted,

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